

**SELF-ALIGNED SILICIDE (SALICIDE) PROCESS FOR LOW RESISTIVITY  
CONTACTS TO THIN FILM SILICON-ON-INSULATOR MOSFETS AND FOR  
SHALLOW JUNCTIONS**

**ABSTRACT**

8           A method (and resulting structure) for fabricating a silicide for a semiconductor device,  
includes depositing a metal or an alloy thereof on a silicon substrate, reacting the metal or the  
alloy to form a first silicide phase, etching any unreacted metal, depositing a silicon cap layer  
over the first silicide phase, reacting the silicon cap layer to form a second silicide phase, for the  
semiconductor device, and etching any unreacted silicon. The substrate can be either a silicon-  
on-insulator (SOI) substrate or a bulk silicon substrate.